

**REPORT ON THE IMPACT OF MISSING PLANT ON ILEC
REVENUE REQUIREMENTS**

Prepared By Snavelly King Majoros O'Connor & Lee, Inc.

would not be overstated as a result of any purported plant overstatement."⁷

Since none of these assumptions is valid, the ILEC analysis is incorrect.

**III. CPR PLANT BALANCES EQUAL ACCOUNTING
PLANT BALANCES**

Bell Atlantic contends that plant missing from an ILEC's CPR does not affect its revenue requirement because its revenue requirement is calculated from its accounting records, not its CPR.⁸ This contention is highly disingenuous.

While it is true that revenue requirements are calculated from the plant balances recorded on an ILEC's accounting records, these balances are equal to the balances on its CPR at the account and sub-account level. Indeed, the entire purpose of the CPR is to validate and support accounting record plant balances.

The ILECs are required to reconcile their CPR records to the accounting records used to calculate their regulated revenue requirements. The Commission requires the CPR to be "equal in the aggregate to the total investment reflected in the financial property accounts as well as the total of the cost allocations supporting the cost-of-service at any particular point in time...."⁹ Ironically, the review made by PricewaterhouseCoopers of Bell Atlantic's process and controls confirms the

⁷ Id., p. 14.

⁸ Response of Bell Atlantic, pp. 13-14.

⁹ 47 C.F.R. §32.2000 (e) (2) (iii).

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efforts made by Bell Atlantic to keep its CPR and accounting records reconciled.¹⁰

Since ILEC CPR and accounting records are reconciled, if an ILEC's plant balances are overstated on its CPR because of missing plant, they are also overstated on its accounting records. And, as will be shown below, if plant balances are overstated, revenue requirements are overstated.

**IV. SOME MISSING PLANT WAS NEVER
PLACED IN SERVICE**

The assumption that all missing plant is due to delayed retirements is not reasonable. BellSouth concludes that "if any assets are listed in the Hard-wired Equipment account CPR that are not in actual service, the only cause is failure to properly retire the asset."¹¹ As support for this conclusion, BellSouth quotes the following audit report statement: "For the purpose of this report, we assume the original costs recorded on the CPR are correct."¹² By taking this sentence out of context, BellSouth draws an erroneous conclusion. The full paragraph from the audit report is as follows:

Since we have not completed our examination of the cost support, we have decided to suspend judgment temporarily on the accuracy of the original costs recorded on BST's CPR. For the

¹⁰ Response of Bell Atlantic, Exhibit 4, pp. 6 and 8.

¹¹ Response of BellSouth, p. 3 (emphasis added).

¹² Id.

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purpose of this report, we assume the original costs recorded on its CPR are correct. At a later date, we will investigate these costs and determine their validity. After we receive and analyze the cost support, we intend to issue a separate report on the matter of cost support.¹³

Clearly, the auditors have not concluded that all missing plant is the result of delayed retirements. In fact, this audit report statement does not even address the question of why plant is missing. It merely defers judgement on the accuracy of cost support documentation.

Indeed, it would be truly incredible if the only cause of missing plant were delayed retirements. Mistakes happen. Vendors on occasion bill for equipment not delivered. Vendors on occasion double bill for equipment. Record-keeping errors occur. Equipment can be lost - or even stolen - before it is placed in service. Effective controls can minimize the effect of such problems, but once an item is erroneously listed on a CPR it stays there as "phantom" plant. It will not be retired, absent the mass retirement of all plant of its type, since it was never in service. Only a physical inventory will disclose its absence. Even then, it may be impossible to determine if the missing plant was ever in service. Suffice it to say, however, that it is a virtual certainty that some "missing" plant was never actually placed in service, and thus cannot be considered a "delayed" retirement.

¹³ BellSouth Audit Report, para. 25 (emphasis added).

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**V. PLANT NEVER PLACED IN SERVICE RESULTS IN AN
OVERSTATEMENT OF REVENUE REQUIREMENTS**

No matter what the cause, if plant is erroneously added to an ILEC's CPR, a revenue requirements overstatement results. The overstatement is two-fold:

1. The ILEC's rate base is initially overstated by the phantom plant investment amount.
2. The ILEC's depreciation expense is overstated to the extent depreciation expense is accrued on the phantom plant.

The magnitude of the rate base overstatement will decrease over time, of course, since ILEC rate bases are based upon net plant, not gross plant. As phantom plant is depreciated on the ILEC's books, the depreciation reserve will increase and net plant will decrease. But until the books show full recovery, both the ILEC's rate base and depreciation expense will be overstated.

**VI. DELAYED RETIREMENTS RESULT IN AN
OVERSTATEMENT OF REVENUE
REQUIREMENTS**

The ILECs are quick to point out that delayed retirements do not result in a rate base overstatement, since the effect of a retirement is to reduce both gross plant and the depreciation reserve by the amount of the retirement.¹⁴ The ILECs are correct on this point. Delayed retirements do not result in a rate base overstatement.

But Ameritech goes on to contend that delayed retirements do not result in a depreciation

¹⁴ See, e.g., Response of Ameritech, pp. 12-13; Bell Atlantic, pp. 14-15; BellSouth, p. 3.

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expense overstatement.¹⁵ Ameritech is not correct on this point. Delayed retirements do result in an overstatement of depreciation expense, and thus revenue requirements.

A. Ameritech Illustration

Ameritech provides a numeric illustration to support its position. Ameritech's analysis of its illustration is flawed, however. Properly analyzed, Ameritech's illustration demonstrates that delayed retirements do cause an overstatement of depreciation expense.

Ameritech's illustration assumes a \$500M asset base, a \$300M reserve (60%), and a 4 year remaining life. Ameritech calculates the remaining life depreciation rate as follows:

$$\begin{aligned}\text{Rate} &= \frac{100\% - \text{Reserve \%}}{\text{Remaining Life}} \\ &= \frac{100\% - 60\%}{4} \\ &= 10\%\end{aligned}$$

Ameritech then calculates depreciation expense as follows:

$$\begin{aligned}\text{Expense} &= \text{Gross Plant} * \text{Rate} \\ &= \$500\text{M} * 10\% \\ &= \$50\text{M}\end{aligned}$$

Next, Ameritech assumes the retirement of \$100M which should have retired earlier. This delayed retirement reduces gross plant to \$400M and the depreciation reserve by an equal amount to \$200M. The reserve ratio drops to 50%. Using the same remaining life (4years), Ameritech recalculates the rate as follows:

¹⁵ Response of Ameritech, pp. 13-14. BellSouth concedes what it terms a "negligible" impact. BellSouth Response, p. 4.

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$$\text{Rate} = \frac{100\% - 50\%}{4}$$

$$= 12.5\%$$

According to Ameritech, this higher rate offsets the lower gross plant, and depreciation expense remains the same,¹⁶ as follows:

$$\begin{aligned}\text{Expense} &= \$400\text{M} * 12.5\% \\ &= \$50\text{M}\end{aligned}$$

Ameritech concludes that, since the expense of \$50M is the same with or without an overstated gross plant, there is no revenue requirement impact.

The flaw in Ameritech's analysis is that the remaining life would not be the same given proper retirements. Indeed, as will be shown below, given proper retirements, the remaining life would increase to 5 years, and the depreciation rate would remain 10%, as follows:

$$\text{Rate} = \frac{100\% - 50\%}{5}$$

$$= 10\%$$

Given proper retirements, depreciation expense would, therefore, decrease, as follows:

$$\begin{aligned}\text{Expense} &= \$400\text{M} * 10\% \\ &= \$40\text{M}\end{aligned}$$

The delayed retirement of \$100M has thus resulted in a \$10M, or 25%, overstatement of depreciation expense.

Indeed, Dr. Ronald E. White, the depreciation expert providing an affidavit for Bell Atlantic,

¹⁶ See, also, response of BellSouth, pp. 3-4; SBC, Attachment C, p. 1.

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also concludes that the depreciation rate would not change given proper retirements. He states:

It is a near certainty that posting these retirements when the plant was physically removed from service would not have changed past depreciation rates.¹⁷

As demonstrated above, if the depreciation rate does not change, depreciation expense will be overstated because the gross plant this rate is applied to is overstated.

B. Remaining Life Development

The average remaining life of a plant category is calculated by applying a "projection life" to a "generation arrangement" of plant in service. The projection life is the expected life of newly placed plant.¹⁸ A generation arrangement is simply a listing of all surviving plant by year of placement that is used in the calculation of the average remaining life of a plant category.¹⁹

Although the Commission reviews past life indications, it prescribes projection lives based upon future expectations. The Commission states:

We note that, since the Commission's Depreciation Reform Proceeding in 1980, the life and salvage factors prescribed by the Commission are forward-looking factors that are based primarily on analysis of incumbent LEC

¹⁷ Bell Atlantic Response, Affidavit of Ronald E. White, Ph.D. ("White Affidavit"), para. 24.

¹⁸ Public Utility Depreciation Practices, National Association of Regulatory Utility Commissioners, August 1996, p. 322.

¹⁹ *Id.*, p. 319.

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investment plans and on judgments regarding the technological obsolescence and economic viability of the assets, rather than a focus on the historical equipment life trends.²⁰

There is no reason to believe, therefore, that delayed retirements would affect the forward-looking projection life prescribed for a plant category.

Attachment 2 to this paper provides a simple generation arrangement consistent with Ameritech's illustration as discussed above. Attachment 2 assumes a projection life of 10 years and a "square" survival curve. The survivor curve is simply a plot representing the percent of plant surviving at each age.²¹ A square curve assumes that all plant retires at the end of its projection life. For sake of illustration, a stable environment is assumed in which plant additions, plant retirements and depreciation accruals are all \$40M per year. Given these specifications, the reserve would stabilize at 50%, and the remaining life would be 5.0 years, as shown in column d.²²

In columns e and f of Attachment 2, it is assumed that \$100M of retirements for the oldest vintages (1985-1987) were "delayed". The result is \$500M of gross plant, a 60% reserve and a 4 year remaining life, as in Ameritech's original illustration. Thus, the failure to properly retire plant has resulted in an overstated gross plant (\$500M vs. \$400M) and an understated remaining life (4

²⁰ 1998 Biennial Regulatory Review - Review of Depreciation Requirements for Incumbent Local Exchange Carriers, CC Docket No. 98-137, Notice of Proposed Rulemaking, FCC 98-170, released October 14, 1998, footnote 6.

²¹ *Id.*, p. 325.

²² Notes for Engineering Economics Courses, American Telephone and Telegraph Company, Engineering Department, 1966, p. 121. Attachment 2 employs direct weighting to calculate the average remaining life for illustrative purposes. Commission depreciation practices use reciprocal weighting, but the end result is essentially the same (See Attachment 3).

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years vs. 5 years).

As Dr. White explains, of course, the change in remaining life is directly related to the age of the plant not retired properly.²³ Attachment 2 assumes that the oldest plant is overstated, not the newest. The great majority of plant missing due to delayed retirements is among the older vintages. This is the case for two reasons. First, minimal plant tends to be withdrawn from service in the early years after placement. Plant tends to be removed from service toward the end of its expected life, not its beginning. Assuming that the failure to properly retire plant is a random occurrence,²⁴ delayed retirements are more likely to occur among older vintages, because more plant is being retired from older vintages.

Second, if plant is withdrawn from service, but not properly retired on the books, it tends to remain on the books virtually forever. Absent the retirement of all plant of its type in its location, or a physical inventory, there is no reason for a retirement entry to be made. So plant missing due to retirement failures initially occurs among the older vintages, and stays missing as these vintages get even older.

Of course, plant missing because it was never placed in service in the first place also stays on the ILEC books indefinitely, as discussed above. In all probability, therefore, plant missing from recent vintages is largely due to the failure to place plant at all, while plant missing from older vintages is a mixture of initial placement and retirement failures.

²³ White Affidavit, Appendix B.

²⁴ Dr. White notes that the failure to record retirements is a "common occurrence." White Affidavit, p. 1.

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VII. CONCLUSION

The ILECs' contention that missing plant has no effect on their revenue requirements is incorrect. Plant missing because it was never placed in service causes an overstatement of both the rate base and depreciation expense. Plant missing because of a failure to properly retire it upon its removal from service causes an overstatement of depreciation expense. In either case, missing plant causes an overstatement of ILEC revenue requirements.

Experience**Snively King Majoros O'Connor
& Lee, Inc.
Washington, DC***Vice President (1996 to Present)**Senior Consultant (1991 to 1995)*

Mr. Lee provides consulting services that reflect his depth of experience with regulated utilities. For over a quarter of a century, he has been extensively involved in regulatory financial and accounting matters.

Mr. Lee has provided expert witness testimony, technical assistance and strategic support to clients in state commission proceedings related to the telephone, cellular telephone and electric industries. His testimony has addressed such matters as intraLATA competition, rate design, interconnection, cost allocation, incentive regulation, productivity, and overall financial performance. Mr. Lee has also conducted a cost allocation and affiliate transaction audit of a major telephone company on behalf of its state commission.

Mr. Lee has assisted clients in proceedings before the Federal Communications Commission (FCC) related to integrated long distance service packages, enhanced services, expanded local exchange interconnection, open network architecture, intelligent networks, rate of return, depreciation, network reliability, incentive regulation, and video dialtone. Recently, Mr. Lee performed a study on plant writedowns in the U.S. telecommunications industry on behalf of the Canadian Radio-Television and Telecommunications Commission.

AT&T, Basking Ridge, NJ*Regulatory Vice President (1988-1990)**Division Manager (1980-1988)*

Mr. Lee represented AT&T before the FCC in all financial and accounting matters. In this capacity, he directed the preparation of all financially related AT&T filings and coordinated the analysis of commission and intervenor responses. In addition, he was responsible for the periodic review of AT&T financial operating results and the development of related capital and expense forecasts.

Mr. Lee directed the design and implementation of AT&T's automated system for the reporting of financial information to the FCC. He also was responsible for the implementation of AT&T's manual for the separation of regulated and unregulated costs and the conversion of the company to the revised Uniform System of Accounts.

His responsibilities included liaison with the FCC's audit staff and coordination of their activities with respect to AT&T. During his tenure, Mr. Lee brought scores of FCC investigations involving many billions of dollars to equitable conclusions.

Mr. Lee participated in the strategic development of price cap incentive regulation proposals and performed numerous related financial analyses. He also conceived and developed a methodology which reduced the administrative burden of AT&T's depreciation filings by over 90%.

Prior to divestiture, Mr. Lee coordinated all Bell System depreciation filings, rate of return pleadings and interstate rate cases. He was responsible for securing FCC approval of the accounting entries which implemented the Modified Final Judgment.

**New York Telephone Company
New York, NY***District Manager (1970-1980)**Accounting Manager (1963-1970)*

Mr. Lee held a variety of progressively responsible positions leading to his selection as the Company's accounting representative before the New York Public Service Commission. In this capacity, he participated in numerous general rate cases and related proceedings.

In an earlier assignment, Mr. Lee directed an inter-departmental study of the company's "Lost Telephone Set" problem. The study resulted in both operational improvements and major strategy changes by the company.

While in a rotational assignment to AT&T, Mr. Lee developed a cost accounting and productivity measurement system that was implemented in all Bell System Comptrollers Departments.

Mr. Lee also managed numerous line organizations of up to 200 persons responsible for billing and collection, property and cost and data processing functions.

Education*Yale University, B.S. (High Honors)**Harvard Business School, MBA (Distinction)***Professional Affiliations***Society of Depreciation Professionals*

**REMAINING LIFE CALCULATION
DIRECT WEIGHTING**
(Dollars in Millions)

Vintage	Age (a)	Remaining Life (b)	Proper Retirements			Delayed Retirements	
			Investment (c)	Weight (d = b * c)		Investment (e)	Weight (f = b * e)
1997	0.5	9.5	\$40	380		\$40	380
1996	1.5	8.5	40	340		40	340
1995	2.5	7.5	40	300		40	300
1994	3.5	6.5	40	260		40	260
1993	4.5	5.5	40	220		40	220
1992	5.5	4.5	40	180		40	180
1991	6.5	3.5	40	140		40	140
1990	7.5	2.5	40	100		40	100
1989	8.5	1.5	40	60		40	60
1988	9.5	0.5	40	20		40	20
1987	10.5	0.0	0	0		40	0
1986	11.5	0.0	0	0		40	0
1985	12.5	0.0	0	0		20	0
Totals			\$400	2000		\$500	2000
Average Remaining Life (Weight / Investment)				5.0			4.0
Reserve				\$200			\$300
Reserve %				50%			60%
Remaining Life Rate (100%-Reserve %) / RL				10%			10%
Depreciation Expense (Investment * RL Rate)				\$40			\$50

Note: 10 Year Projection Life, Square Curve.

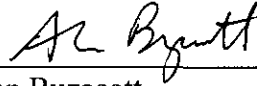
**REMAINING LIFE CALCULATION
RECIPROCAL WEIGHTING**
(Dollars in Millions)

Vintage	Age (a)	Remaining Life (b)	Proper Retirements					Delayed Retirements			
			Investment (c)	ASL Weight (d = c/(a+b))	Net Plant (e = (b*c)/ASL)	RL Weight (f = e / b)		Investment (f)	ASL Weight (g = f/(a+b))	Net Plant (h=(b*f)/ASL)	RL Weight (i=h/b)
1997	0.5	9.5	\$40	4.0	\$38.0	4.0		\$40	4.0	\$36.9	3.9
1996	1.5	8.5	40	4.0	34.0	4.0		40	4.0	33.0	3.9
1995	2.5	7.5	40	4.0	30.0	4.0		40	4.0	29.1	3.9
1994	3.5	6.5	40	4.0	26.0	4.0		40	4.0	25.2	3.9
1993	4.5	5.5	40	4.0	22.0	4.0		40	4.0	21.3	3.9
1992	5.5	4.5	40	4.0	18.0	4.0		40	4.0	17.5	3.9
1991	6.5	3.5	40	4.0	14.0	4.0		40	4.0	13.6	3.9
1990	7.5	2.5	40	4.0	10.0	4.0		40	4.0	9.7	3.9
1989	8.5	1.5	40	4.0	6.0	4.0		40	4.0	5.8	3.9
1988	9.5	0.5	40	4.0	2.0	4.0		40	4.0	1.9	3.9
1987	10.5	0.5	0	0.0	0.0	0.0		40	3.6	1.9	3.9
1986	11.5	0.5	0	0.0	0.0	0.0		40	3.3	1.9	3.9
1985	12.5	0.5	0	0.0	0.0	0.0		20	1.5	1.0	1.9
Totals			\$400	40.0	\$200	40.0		\$500	48.5	\$199	48.5
Average Service Life (Investment / ASL Weight)				ASL =	10.0			ASL =			
Average Remaining Life (Net Plant /RL Weight)				RL =	5.0			RL =			

Note: 10 Year Projection Life, Square Curve.

STATEMENT OF VERIFICATION

I have read the foregoing, and to the best of my knowledge, information, and belief there is good ground to support it, and that it is not interposed for delay. I verify under penalty of perjury that the foregoing is true and correct. Executed on September 23, 1999.

A handwritten signature in cursive script, appearing to read "Alan Buzacott", is written over a horizontal line.

Alan Buzacott
Regulatory Analyst
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Washington, D.C. 20006
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CERTIFICATE OF SERVICE

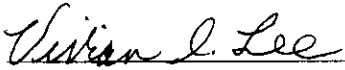
I, Vivian I. Lee, do hereby certify that copies of the foregoing Comments were sent via first class mail, postage paid, to the following on this 23rd day of September, 1999.

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